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ABSTRACT

One of a series of instructional materials produced by the Literacy Council of Alaska, this booklet provides information about food poisoning. Using a simplified vocabulary and shorter sentences, it explains the various kinds of food poisoning, how people get food poisoning, and how to prevent it. (FL)

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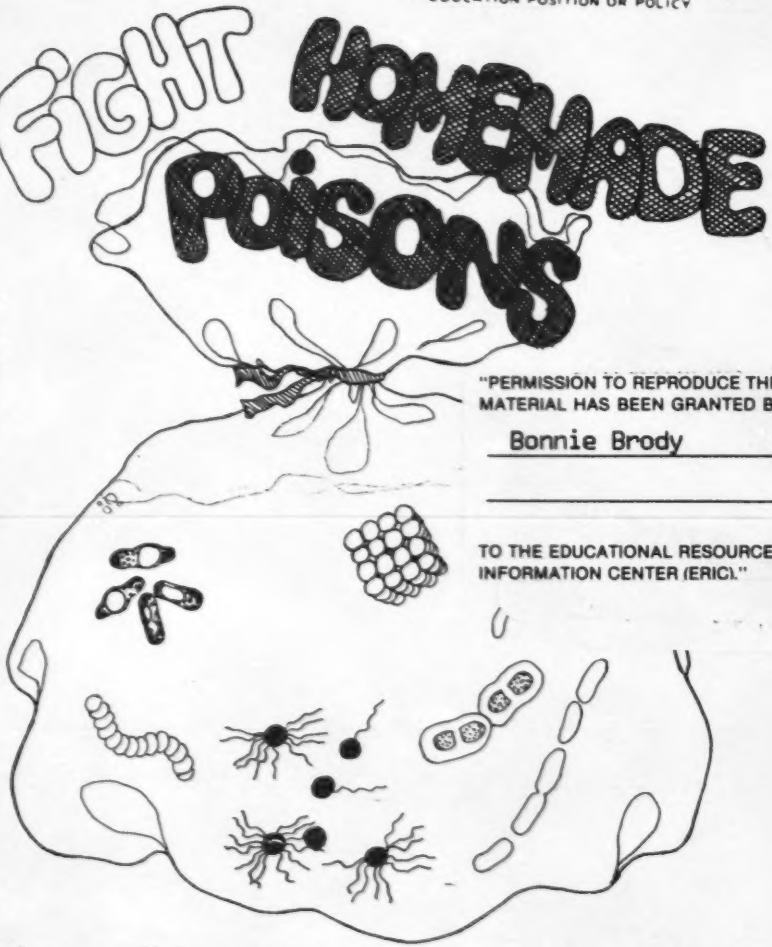
FIGHT HOMEMADE POISONS



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HOME FOOD CARE AND PRESERVATION

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HOME FOOD CARE AND PRESERVATION

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The Letter

I was home from high school for the summer. It was August and I was getting ready to go back to school. I was really looking forward to seeing all my friends. Then, one day, I heard from one of those friends. She was from a village down river from ours.

My hand shook as I read the letter.

1.

Dear Sonnie-

I'm just writing to tell you this.
I won't be back to high school this year. I guess you heard about the awful thing that happened here. My sister and all her family died - except the baby. Two others died too. And some got so sick they are still in the hospital. I still can't believe it.

This all happened two weeks ago. My sister and some other people got food poisoning. I didn't go there to eat that night. I don't like fermented fish. I still think about how I almost went.

The next night I heard people yelling "Come help! Mary's house! Come quick!" I ran there as fast as I could.

It was terrible. They were sick. All of them. All over the house. They were crying - even old grandpa. Mary couldn't walk. We had to carry her. The kids were falling everywhere. They said they couldn't see right.

Then someone said they were sick at John's house too! Someone called the hospital on the radio and they sent planes. But we had two days! two terrible hours! It was like two days!

Finally the plane came and took all the sick people to the hospital. Later we got word. Mary's whole family and John's oldest son and daughter had died. They thought the others would make it.

Now its up to us to build eight coffins.

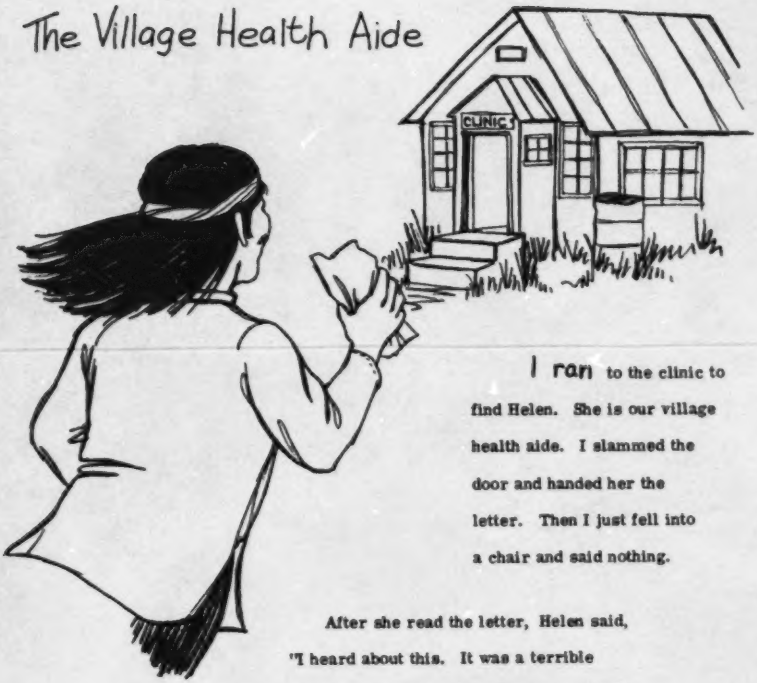
I have got to stay home this year and take care of Mary's baby.

I'll sure miss going back to high school.

Your friend,

Margie

The Village Health Aide



I ran to the clinic to find Helen. She is our village health aide. I slammed the door and handed her the letter. Then I just fell into a chair and said nothing.

After she read the letter, Helen said, "I heard about this. It was a terrible thing. What makes it worse is - it didn't have to happen. Food poisoning is a homemade poison. It can be prevented."

"But how did it happen?" I asked. I thought of Margie. "How could a whole family die?"

Helen reached in a drawer and held something out to me.

It was a Plastic Bag!

"A plastic bag?" I said. I held the bag in my hand and looked at Helen. "How could this kill people?"

Man's Search for Food

Helen smiled. "Ever since we were kids, you always wanted to know about things. You always cared for people. Come, if you are so interested. I'll tell you about how things like this can happen. Let's start at the beginning.

As you know, hunting food has been the most important thing in the life of all people. From the beginning of time people have chosen to live where they can get the most food. Then they have moved on when the food supply has run out.

But there has always been a problem. Sometimes, some seasons, there is a lot of food. Other times there is none. And when there is plenty of food you can't eat it all.

So the food has to be saved or preserved. It has to be dried or pickled or fermented or - now days - canned, jarred or frozen.

You and I know some of the ways people preserved food long ago. But let's go ask Grandma Lucy to tell us more."

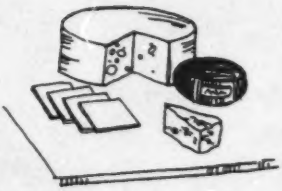
5.

Grandma Tells About the Old Days

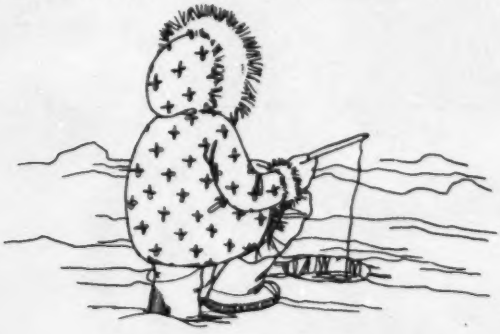
Old Grandma was happy to tell us how they saved food in the old days.

"Long ago we used to wrap a pike fish in grass and bury it in the ground for 2 to 3 weeks. Then we ate it just raw. We called it "stinkfish." She laughed when I made a face. "Young kids... you young kids don't eat like we used to. Too much candy and pop! Too bad. We hung fish to dry and then smoked it just like we do today. It was harder to catch with old time fish traps. We put berries in a barrel with sugar to make ice cream in winter. And we still salt fish in a barrel. We sometimes put fish in a cloth bag and hung it in the river for a couple of weeks - 'til it got good and sour.

6.



Helen noticed my face again. She said, "In the old days people fermented food because it was one way to save it for another season when they wouldn't have any. Fermented food is eaten everywhere. Alaska Natives aren't the only ones who like to eat rotten things." She laughed. "Just think about cheese. It's sour milk left to rot and mold. Some of that sure stinks. And then there is sauerkraut - fermented cabbage. Wine is fermented grape juice. In Alaska people like fermented fish, fish eggs, seal flippers, eggs, muktuk and beaver tails."



"Modern Things can be Dangerous if they are Not Used Right!"

"Now days we have refrigerators, freezers, pressure cookers, jars and even tin cans for canning. We use sugar to help preserve berries in jams and jellies, and lids to seal the jars. We have aluminum foil and plastic bags to keep food from drying out. Our stoves and ovens have thermostats and thermometers to tell how hot the food gets. And we have thermometers we can stick right into the food to be sure it gets cooked well in the middle.

When we use all these modern things right and follow a few simple rules - we can **safely** preserve food for long periods of time. But the trouble comes when we try to mix the old ways with the new.

"A Plastic Bag is a Dangerous Place for Fermenting Food."

This brings us back to the plastic bag. Margie's sister tried to ferment fish in a plastic bag. To make it go faster they put the plastic bag near the wood stove. Then later, they ate the fish without heating it up.

They died of botulism. Botulism is the most deadly food poison of all. In fact, botulism is the most deadly poison known to man.

Bacteria causing botulism grow without air.

Botulism grows in warm, moist foods.

So - when those people put the fish in a plastic bag and sealed it, it was airtight. Then they kept it warm near the stove. It was an ideal, fatal place for botulism to grow."

"Couldn't they tell the food was not good? Wouldn't it smell funny?" I asked.

"You can't tell if food contains botulism. You can't smell or taste it."

And eating only a small amount can be fatal."

9.

Is Botulism the only Food Poisoning?

I've heard of people getting sick, but not dying from eating spoiled food. Remember last summer - after that potlatch? A lot of people got sick then."

No, here are some other Food Poisons— Salmonella, Shigella, Clostridium, Perfringens, and Staphylococcal.

"The kind of food poison people had here last summer was called staphylococcal. It is the most common kind of food poison. People rarely die from it," she said. Then she laughed. "But sometimes they feel so sick they wish they would!

"It causes vomiting, diarrhea, stomach cramps. What happened last summer was that someone with an infected cut on her hand made a fish salad. The cut was infected with staph bacteria and this bacteria got into the salad. Then it sat around on a hot day for a few hours before the potlatch. Bacteria need warm, rich and moist places to grow - so there it was. By the time people ate, the bacteria had spread through the salad. Everyone who ate that salad got sick."

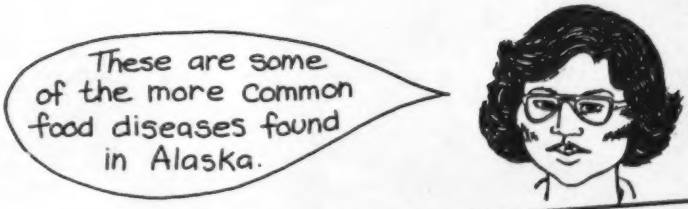
"But it didn't need to happen," she said. "If the person with the infected hand had let someone else make the salad - or, even if they had put the salad in a refrigerator and kept it cold until it was time to eat, those people wouldn't have gotten sick!

A person with infected cuts on his or her hands should not handle food. All persons should wash their hands before handling food.

"Come back to the clinic with me. I'll show you a chart that tells about food poisons and food born diseases. Then maybe we can talk about what we could do here in our village to prevent them."

We went into the clinic and Helen showed me the chart. The names were hard to say.

11.



ILLNESS	HOW DO YOU GET IT? HOW DOES IT SPREAD? WHAT CAUSES IT?
Botulism	Foods canned or jarred in the home that have not been heated properly. Foods stored in plastic bags or airtight containers, or in oil, then eaten raw - fish, fish eggs, beaver tails, seal meat, whale meat, smoked fish. Sometimes canned tuna, salmon, liver paste. DOES NOT AFFECT SMELL OR TASTE OF FOOD.
Staphylococcal	This is a normal skin bacterium. Most people have staph bacteria on their skin. Contact with another person who has it! Cooked ham or other meats, cream filled or custard desserts, dairy products, fish salad and other salads, warmed up leftovers. DOES NOT AFFECT SMELL OR TASTE OF FOOD.
Salmonella	Meat, fish, poultry, salads, eggs with cracked shells, dirty eggshells. Contact with human and animal carriers. Water polluted by human excreta. DOES NOT AFFECT SMELL OR TASTE OF FOOD.
Shigella	Contaminated water. Spread through food, moist prepared foods, milk or other dairy products. Contact with person who has it.
Clostridium Perfringens	Meat not cooked through, then allowed to cool slowly; then served day after day or without heating thoroughly.

SYMPTOMS	HOW LONG UNTIL YOU GET SYMPTOMS	HOW IT CAN BE PREVENTED
Double vision, dizziness, lassitude, difficulty swallowing, vomiting, dry mouth, OFTEN FATAL	14-36 hours	1. Never pickle or ferment any foods in plastic bags or airtight containers. 2. Cook foods before serving. Boil 15 minutes, stirring to heat all parts, or pressure cook
Nausea, vomiting diarrhea, cramps, prostration	2-6 hours	1. Refrigerate moist foods during storage. 2. Cook foods thoroughly. 3. Don't let people with colds, sore throats or skin infections handle foods. 4. Re-heat custard desserts. 5. Cooks - wash hands often.
Abdominal pain, diarrhea, chills, fever, vomiting, prostration	7-21 days	1. Cook foods thoroughly. 2. Refrigerate moist foods. 3. Wash hands often. 4. Protect food from animal excreta 5. Don't let sick people work around food.
Diarrhea, bloody stools, fever sometimes	2-3 days	1. Personal cleanliness in food preparation 2. Refrigerate moist foods. 3. Cook foods before serving. 4. Kill flies in house.
Abdominal pain, diarrhea	8-22 hours	1. Cook meat well before serving. 2. Refrigerate to store.

Gee Helen, those are strange words. How many people can even say them? How can people fight a disease they cannot even pronounce? How can people prevent these things when they are hard to understand.

The names are not so important. The ways to prevent them are easy to remember.

1. Follow canning directions EXACTLY when using a pressure cooker.

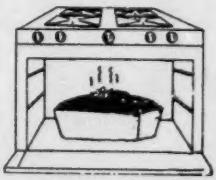
Remember - the size of the container is important. The larger the container, the longer you cook.

2. Never keep foods warm (room temperature or body temperature) in plastic bags.

3. Keep both the cook and the kitchen clean.

4. When you re-cook food - be sure it heats through, boiling for 10 minutes.

5. Keep cold foods cold...



and hot foods hot.

6. When in doubt, throw it out.

16.

7. Don't use cracked or broken eggs.

8. Don't thaw and then refreeze meat.

If canned foods freeze, thaw them out.

Check to see if the seal is broken or cracked.

Check to see if they have any leaks.

If they are cracked, bulging or leaking - THROW THEM OUT!

If frozen foods thaw -
DON'T REFREEZE.

Cook them immediately.
And cook them well.

9. If the lids or the sides of canned foods from the store BULGE,

Danger! Throw them out or take it to the storekeeper.

10. If foods are made for a potlatch, potluck or picnic - keep them refrigerated until serving - especially...

salads

stuffing

custards and pastries

It looks like the causes of these poisons or diseases are almost the same. Like not cooking things long enough. And not storing them correctly and keeping clean and all the things on that list. Is this right?

"Some of these diseases are far more serious than the others. Some of them can kill a person or several people. Some of them make people very sick, but they do get well. And some of them make people sick for a long, long time and later lead to death.

Diseases are caused by food germs. Some germs are tiny organisms called bacteria. Food bacteria live and grow in food.

"Food poisoning is usually caused by disease carrying bacteria that get in food and water. These bacteria get into the food and water from humans.

Some bacteria are harmless. Some are even good. But many kinds can cause people to become very sick - or die!

Helen stopped for a minute, then said, "Listen to this. Bacteria multiply fast! One bacteria can multiply into 281, 000, 000, 000, 000 bacteria in 24 hours.

"Bacteria grow fast at body or room temperatures. Their growth is slowed by freezing. But most important, bacteria are killed by heat! Bacteria are everywhere. But they are harmless unless we make the right kind of environment for them. That is why I say food poison is a homemade poison."

The Worst Food Poison of all is Botulism!

Botulism spores (tiny seeds or sprouts - so tiny you can't see them) are everywhere. They are on the ground, on our hands and in our houses. But they cannot grow where there is oxygen. Botulism bacteria can only grow in a warm, moist place where there is no air, no oxygen.

This is where the plastic bag comes in. But before we get into botulism, let's talk about fermenting.

Fermentation is caused by bacteria too. Good bacteria. These bacteria usually work where there is some oxygen.

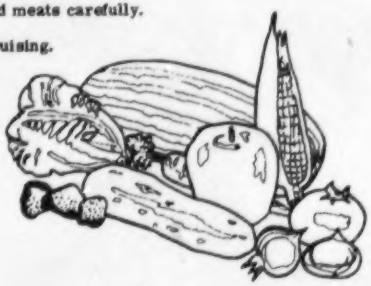
Long ago, when people wrapped things in grass or put them in burlap and hung it in the river, or salted it in a wooden barrel, the food was able to "breathe." It fermented naturally.

Then came modern plastics and glass in airtight containers. Remember, fermentation takes air. When the air is used up in an airtight container, botulism can start to grow! People who try to ferment food in plastic bags are foolish.

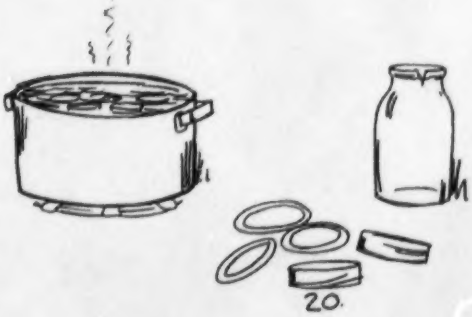
Home Canning or Jarring Must be done Exactly Right!

When canning with a pressure cooker:

1. Wash all vegetables, fruits and meats carefully.
2. Handle with care to prevent bruising.



3. Wash, rinse and boil utensils and work surfaces between usings.
4. Don't use jars with nicks, cracks or rough edges.
5. Use new rubber rings and new metal lids.
6. Scald the washed jars in boiling water and keep them hot.



8. Before putting on lids, wipe off the jar rims with a clean piece of cloth dipped in hot water.

Then pressure cook according to the recommended time and pressure for that food. When you get ready to eat the jarred food - look for tell-tale signs of failure:

If the seal on the lid is leaking,

If the lid bulges and "plinks" when you push it down,

If the food looks or smells bad,

Throw it out!

Remember - the most dangerous food poison, botulism, is odorless, colorless, tasteless.

A Clean Kitchen and a Clean Cook (and helpers!)

* pots, pans, utensils: wash with hot soapy water. Rinse well, and let air dry.
* cutting boards: scrub with hot, soapy water and rinse well. It is better to have three cutting boards: (1) meat and poultry, (2) fruits and vegetables, and (3) bread and cake.
* work surfaces: scrub with hot soapy water and rinse well.
* floors: mop with hot soapy water and rinse well.
* slop bucket: empty often, scrub out with brush and disinfectant.
* trash can: empty often, burn burnables.
* wash stand: keep separate towels, pan and slop bucket for washing up. Don't use the dish pan.
* water barrel: clean and covered.
* cabinets and storage areas: keep clean and dry and free of bugs and mice. Don't store food with soap, cleaning materials or other poisons.

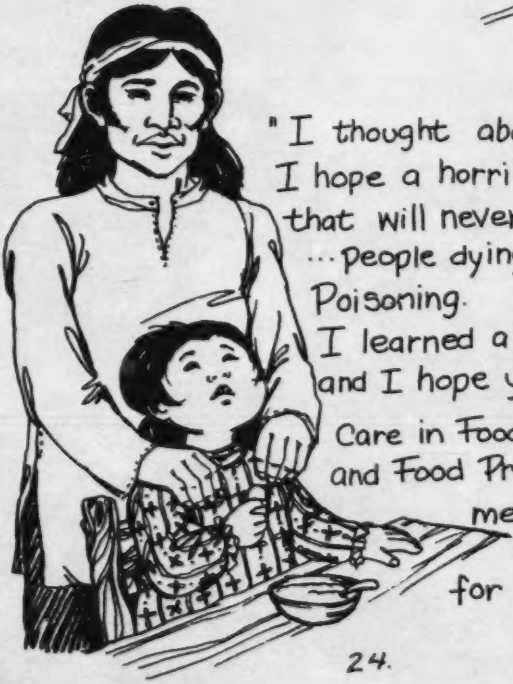
Keep your hands clean when you work in the kitchen.

1. Wash in warm soapy water.
2. Keep fingernails clean.
3. Open cuts, sores, boils and rashes should not touch food. Cover with a clean bandage.
4. **Wash hands** after using the toilet or blowing your nose.

Don't sneeze or cough near food or dishes. If you are sick - get someone else to do the cooking.

Remember these four things:

1. **Clean kitchen, clean cook!**
2. **Keep HOT things HOT and COLD things COLD!**
3. **When in doubt,- THROW IT OUT!**
4. **Never ferment food in plastic bags or buckets!**



"I thought about Margie. I hope a horrible thing like that will never happen again ...people dying from Food Poisoning. I learned a lot from Helen and I hope you have too. Care in Food Preparation and Food Preservation means Safe Eating for Everyone!"